

Work Order ID 56716

March 5, 2010 9:59:52 AM

Page 1

Item ID: D412-742-041

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Float Skidtube

Start Date: 05/03/2010 Start Qty: 1.00

Cust Item ID:

Required Date: 17/03/2010 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals:

Process Plan:

Date: 10-3-05 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D3391

Rev H

0.00

0.00

100



DC

Document Control

DOCUMENT CONTROL

Memo

If D412-742-041 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-041 CHG004

N/A

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 56716

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Page 2

Item ID: D412-742-041

Accept



Setup

Start



Revision ID:

Item Name: Replacement Float Skidtube

Stop



Start Date: 05/03/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 17/03/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110



HandFinish

Hand Finishing

HandFinishing

0.00

Memo

0.00

=> 4/10/07/15 XL

1-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.
A/R ☐ Sikaflex-241/-291 ☐ M1115114
Expiry date: ☐ 10/10/1

2-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Seal all bolts with sikaflex except ones with inserts on inside of tube, hand tighten only bolts with no sikaflex.
A/R ☐ Sikaflex-241/-291 ☐ M1115114
Expiry date: ☐ 11/10/1

3-Remove "T" pins once sikaflex is dry.

4-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.
A/R ☐ LPS Procyon ☐ M104251

120



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

8/10/07/15

XL

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Accept



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Start



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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130



Packaging

Packaging

0.00

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D412-742-
041 ☐ Location: ☐ PPP Rev:

PPPS6722

140



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

C 10/1/23 @

10/07/26 J

MF

10-7-23

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Page 1

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Parent Item Name: Replacement Float Skidtube

Comments: IPP Rev A ☐ 05.10.13 ☐ New Issue ☐
 IPP Rev B ☐ 06.02.13 ☐ ECN 773 dwg @ rev.D
 IPP Rev C 07-05-28 As per Rev F
 IPP rev D 07.11.01 ecn 1053p

KJ/JLM ☐
 EC
 JLM
 EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

AN3C4A



Purchased No

110 Each

1,649.000 24.0000

BOLT

Warehouse

Location

Main Warehouse

ST

Loc Qty

1649

112314

13

112720

12

112724

3

112829

1

112991

2

113121

64

113226

344

113644

110

113749

100

114103

500

114108

500

AN3C6A



Purchased No

110 Each

718.0000 12.0000

BOLT

Warehouse

Location

Main Warehouse

ST

Loc Qty

718

111982

718

Loc Code

M114859

X24 HJ 10/07/14

Loc Code

X12 HJ 10/07/14

W/O:		WORK ORDER CHANGES					
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IPP Rev: C 07-05-28 As per Rev F
IPP rev D 07.11.01 ecn 1053p

KJ/JLM
EC
JLM
EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

AN3C7A Purchased No 110 Each 485.0000 8.0000
BOLT

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

485

105906

21

107376

252

113149

212

AN960C10L Purchased No 110 Each 388.0000 44.0000
washer NAS1149C0332R

Warehouse
Location

Loc Qty

Loc Code

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

288

112116

128

112612

160

1115000

x44

23 10/04/14

x8 11

10/07/14

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Page 2

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 IPP rev D 07.11.01 ecn 1053p

KJ/JLM ☐
 EC
 JLM
 EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

AN960C416L

Purchased No 110 Each

1,314.000 4.0000



WASHER

Warehouse
Location

Loc Qty

Loc Code

OFFSHORE

FG 44

104925 44

Main Warehouse

ST 1270

111916 2

112612 368

112794 500

112828 400

D3391-011

Manufactured No 110 Each

0.0000 1.0000



Fwd Tube Assembly

D3391-013

Manufactured No 110 Each

0.0000 1.0000



Mid Tube Assembly

D3391-015

Manufactured No 110 Each

0.0000 1.0000



Aft Tube Assembly

*Pulled on
 D 3391-013
 ✓
 A*

*mk
 10-7-23*

*x4 x1 10/07/14
 1337539 x1 x1 10/07/14
 1356730 x1 x1 10/07/14
 1356734 x1 x1 10/07/14*

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Page 3

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Page 4

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IPP Rev C 07-05-28 As per Rev F
IPP rev D 07.11.01 ecn 1053p

KJ/JLM
EC
JLM
EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

D3564-1

Manufactured No

110 Each

18.0000 1.0000



Wearshoe

Warehouse
Location

Loc Qty

Loc Code

OFFSHORE

FG

2

33798

2

Main Warehouse

ST

16

47531

1

50270

1

51676

14

X1 22 10/07/14

March 5, 2010 9:59:48 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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IPP Rev C 07-05-28 As per Rev F
IPP rev D 07.11.01 ecn 1053p

KJ/JLM
EC
JLM
EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

D3564-3

Manufactured No

110 Each

19.0000 1.0000



Wearshoe



Warehouse
Location

Loc Qty

Loc Code

OFFSHORE

FG

2

33764

2

Main Warehouse

FP

5

50113

5

Main Warehouse

FP19

11

55489

11

Main Warehouse

ST

1

46445

1

VI 10/07/14

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Shop Packet Print

Page 5

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Page 6

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IPP Rev C 07-05-28 As per Rev F
IPP rev D 07.11.01 ecn 1053p

KJ/JLM
EC
JLM
EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

D3564-5



Wearshoe

Manufactured No

110

Each

36.0000

1.0000



Warehouse

Location

Loc Qty

Loc Code

OFFSHORE

FG

2

B 58709

34806

2

X1

X1 10/07/14

Main Warehouse

FP19

32

51925

1

54772

6

55024

12

55333

13

Main Warehouse

ST

2

45824

1

47433

1

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Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 7

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 IPP Rev B 06.02.13 ECN 773 dwg @ rev.D
 IPP Rev C 07-05-28 As per Rev F
 IPP rev D 07.11.01 ecn 1053p

KJ/JLM
 EC
 JLM
 EC

Start Date: 05/03/2010

Required Date: 17/03/2010

Start Qty: 1.00

Required Qty: 1.00

D3566-1



Gasket

Manufactured No

110

Each

23.0000

2.0000



Warehouse

Location

Main Warehouse

FP

52512

54480

55011

55320

Main Warehouse

ST

46349

51218

51259

Loc Qty

18

3

1

1

13

5

1

1

3

Loc Code

B59726

✓ 2 10/07/14

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Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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KJ/JLM ☐
 EC
 JLM
 EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

D3566-5



Gasket

Manufactured No

110

Each

26.0000

1.0000



Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

FP19

22

B59158

55026

10

55335

12

Main Warehouse

ST

4

36113

1

46186

1

47318

1

51260

1

110

Each

37.0000

2.0000



Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST

37

46105

29

47121

8

B57330

D3591-1



Bushing

Manufactured No

March 5, 2010 9:59:48 AM

Shop Packet Print

Page 8

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 IPP Rev:C 07-05-28 As per Rev F
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KJ/JLM ☐
 EC
 JLM
 EC

Start Date: 05/03/2010

Start Qty: 1.00

Required Date: 17/03/2010

Required Qty: 1.00

D3672-3



Phenolic Washer

Manufactured No

110

Each

524.0000 4.0000



Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST117

24

51596

24

Main Warehouse

ST77

500

55560

500

110

Each

22.0000 4.0000



MS27039C4-12



SCREW

Purchased

No

Warehouse

Location

Loc Qty

Loc Code

Main Warehouse

ST

22

12726

4

2296

2

5558

16

11114228

rd 10/07/10

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Shop Packet Print

Page 9

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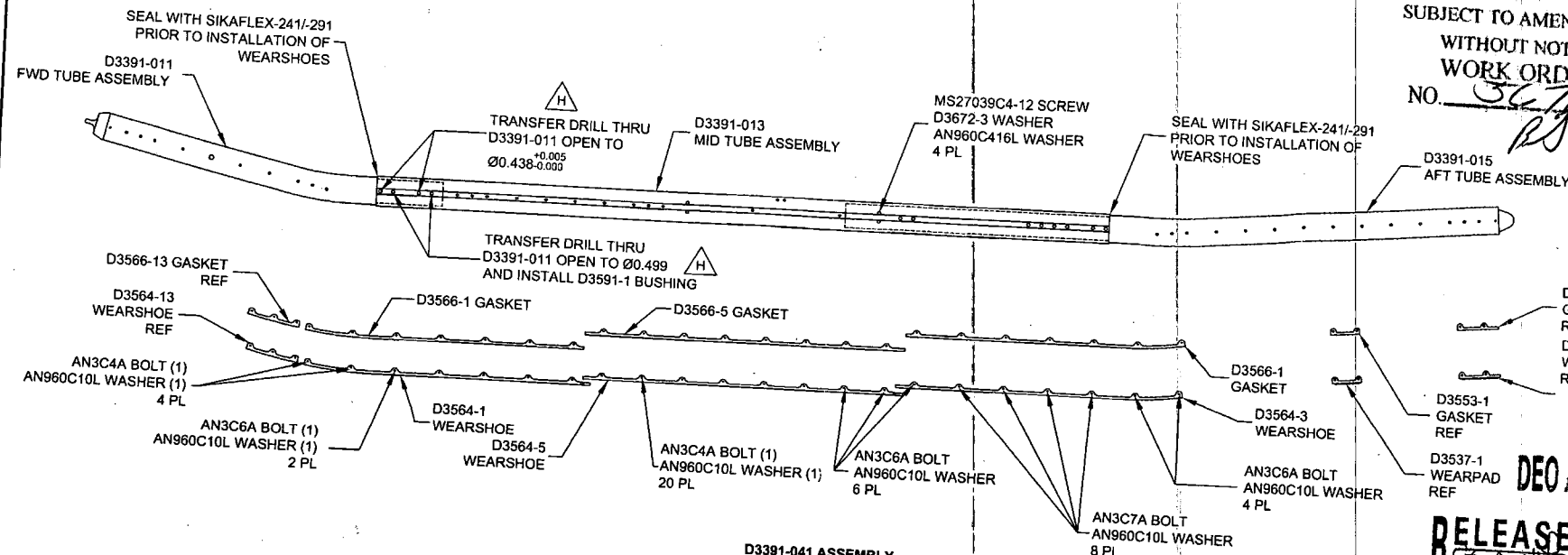
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SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 56746
23103-5



D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3566-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
1	D3566-5	GASKET
2	D3561-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

REV.	DESCRIPTION	BY	DATE
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
DESIGN	PH	DATE	
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.08.20		

DART AEROSPACE USA, INC
PORT HADLOCK, WA
DRAWING NO. D3391
TITLE 412 FLOAT SKIDTUBE
REV. H
SHEET 1 OF 8
SCALE
NTS

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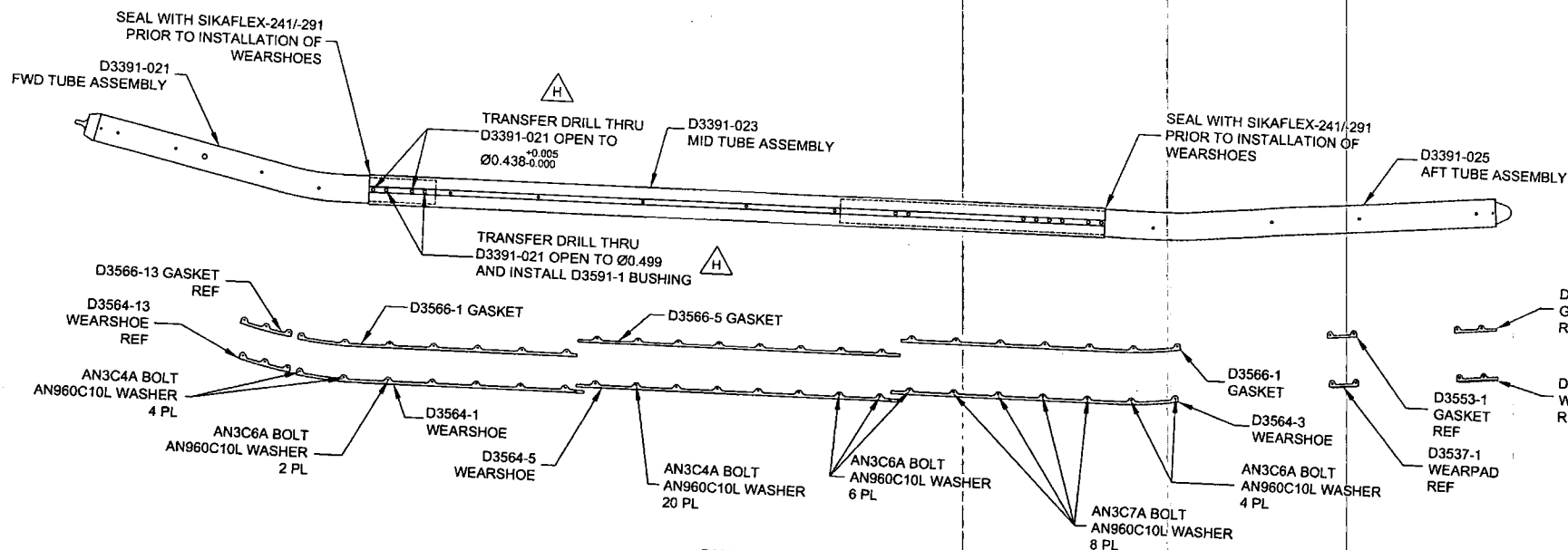
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
64	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DEO ATTACHED

RELEASED
28-01-25/17

W10 56716

DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA DRAWING NO. D3391 TITLE 412 FLOAT SKIDTUBE SCALE NTS COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>
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DE APPR.		
DATE	08.08.20	

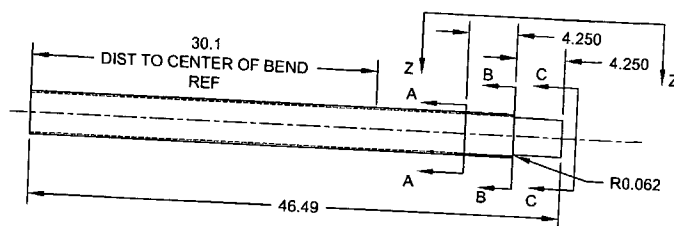
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

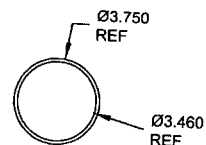
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

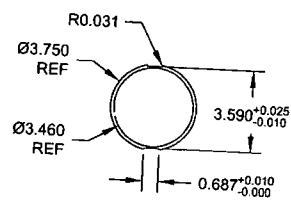
NOTE: Date & initial all entries



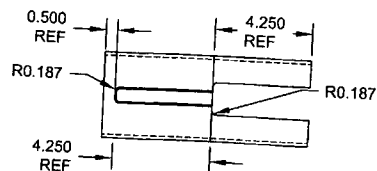
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



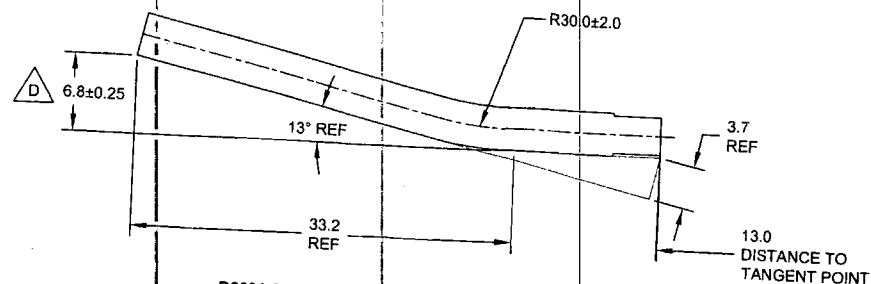
SECTION A-A
SCALE 2X



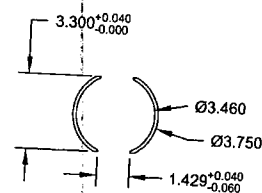
SECTION B-B
SCALE 2X



VIEW Z-Z
SCALE 2X



D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



SECTION C-C
SCALE 2X

DEO ATTACHED
RELEASED
28 JAN 05 NW

WLO 56714

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DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
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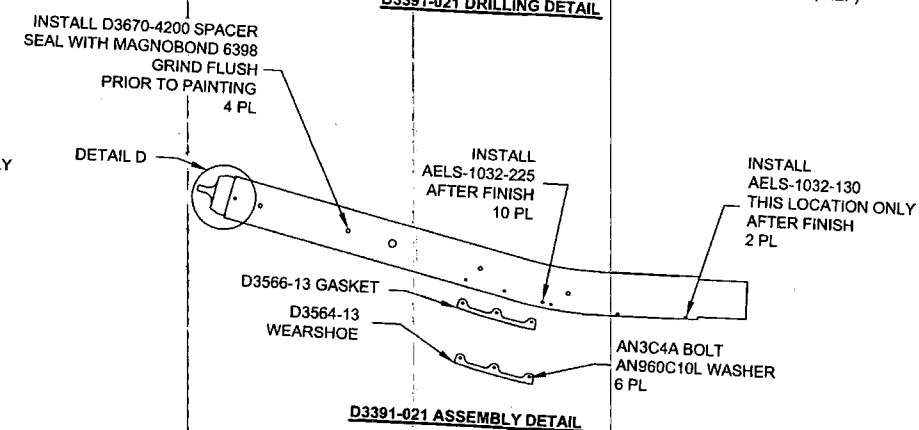
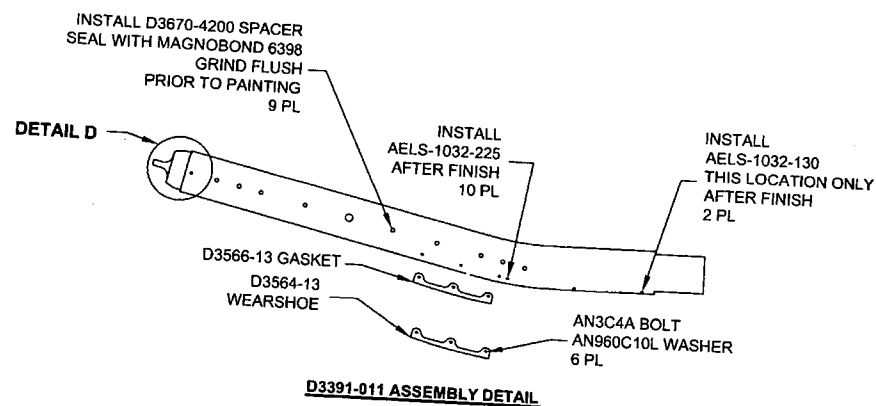
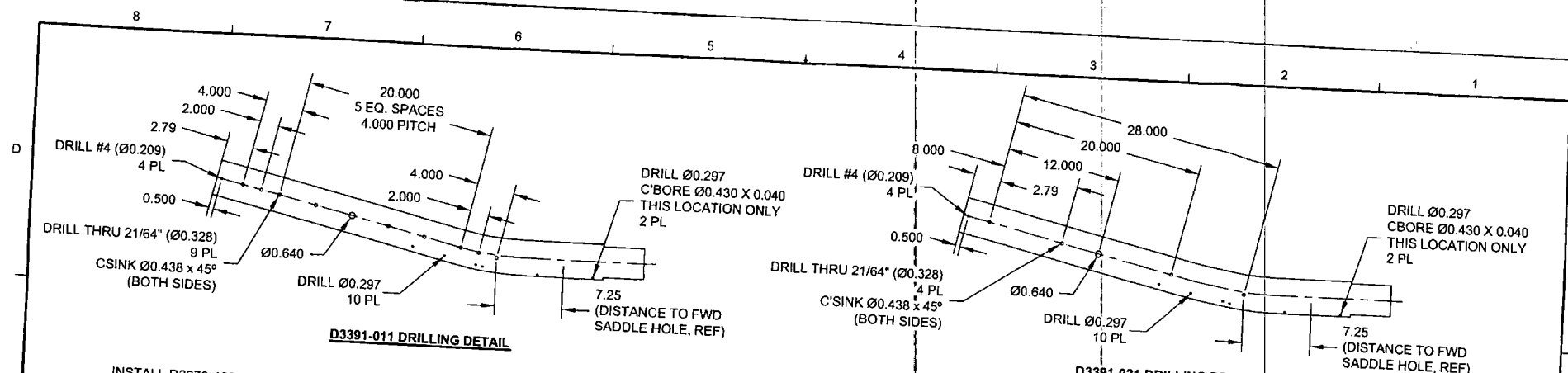
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

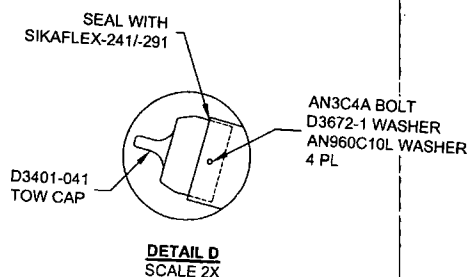
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

FWD TUBE ASSEMBLY PARTS LIST			
QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2	2	AE1S-1032-130	INSERT
10	10	AE1S-1032-225	INSERT



DEO ATTACHED

RELEASE
02-09-75

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 4 OF 4
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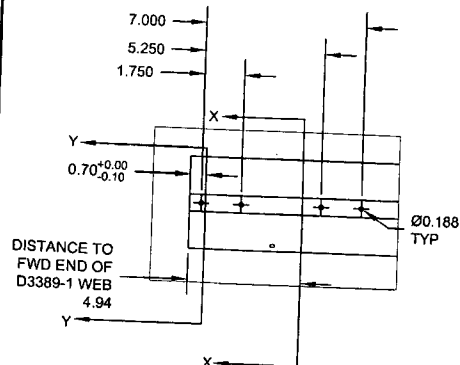
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

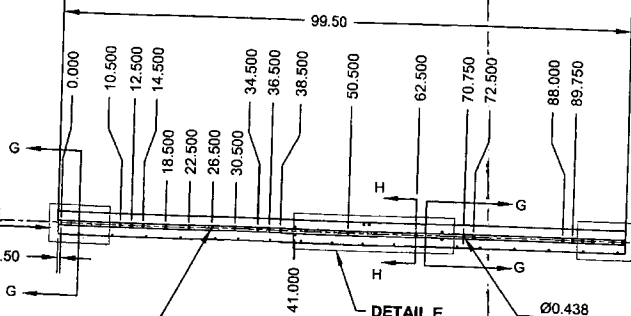


DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL

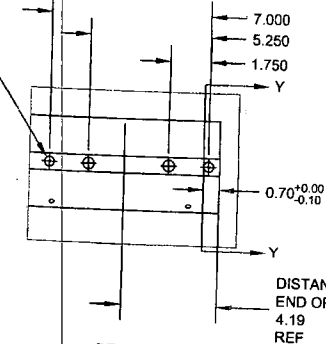
REFER TO
DETAIL J

D3391-013 ASSEMBLY DETAIL



REFER TO
DETAIL K

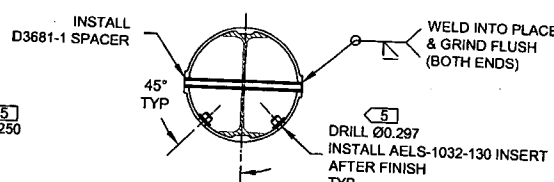
Ø0.438
TYP



DETAIL K
SCALE 4X

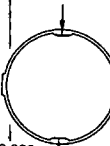


SECTION G-G
SCALE 5X



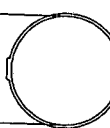
SECTION H-H
SCALE 5X

REMOVE 0.030
FROM TOP AND BOTTOM
TO 3.610



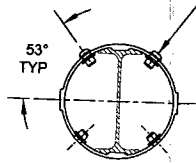
SECTION X-X
SCALE 5X

REMOVE 0.225
FROM TOP AND BOTTOM
TO 3.800
(0.7 FROM BOTH ENDS)



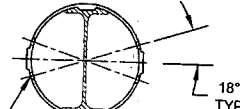
SECTION Y-Y
SCALE 5X

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL



SECTION M-M
SCALE 5X

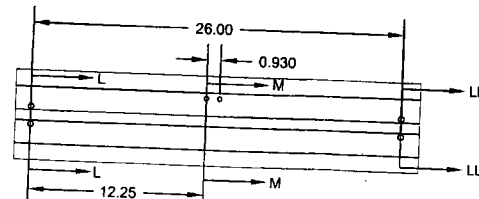
DRILL Ø0.250
4 PL



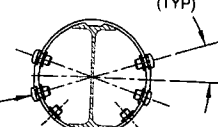
SECTION L-L
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



DETAIL E
SCALE NONE



SECTION L-L
SCALE 5X

D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004

DEO ATTACHED

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DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
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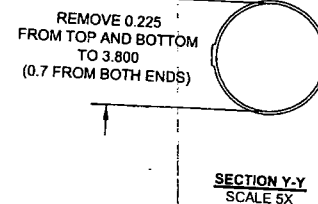
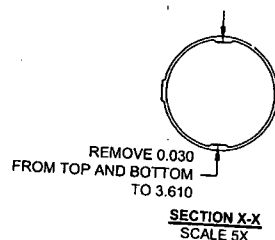
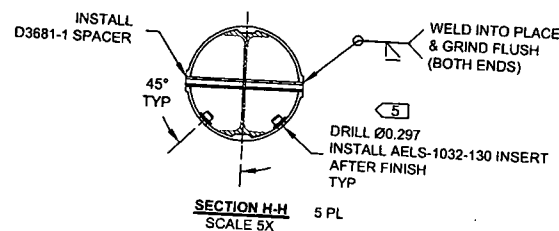
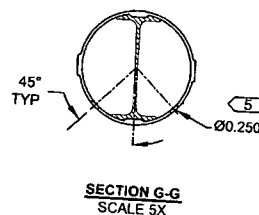
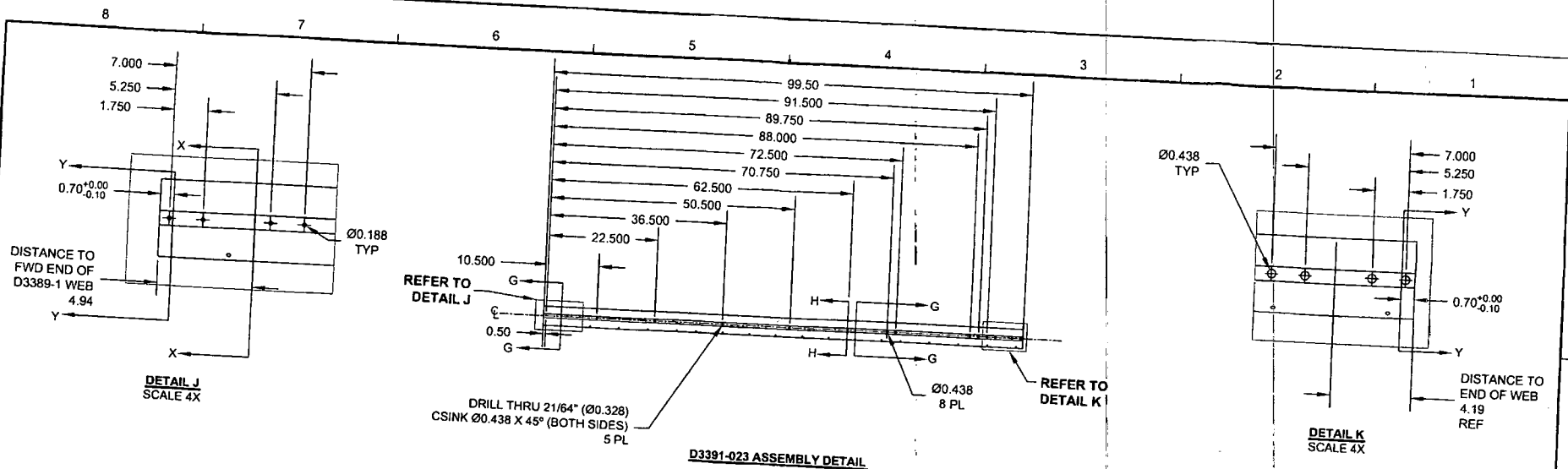
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-023 MID TUBE ASSEMBLY PARTS LIST		
QTY -	PART NUMBER	DESCRIPTION
1	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
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DEO ATTACHED
RELEASED
08-09-05-14

W/L 36216

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

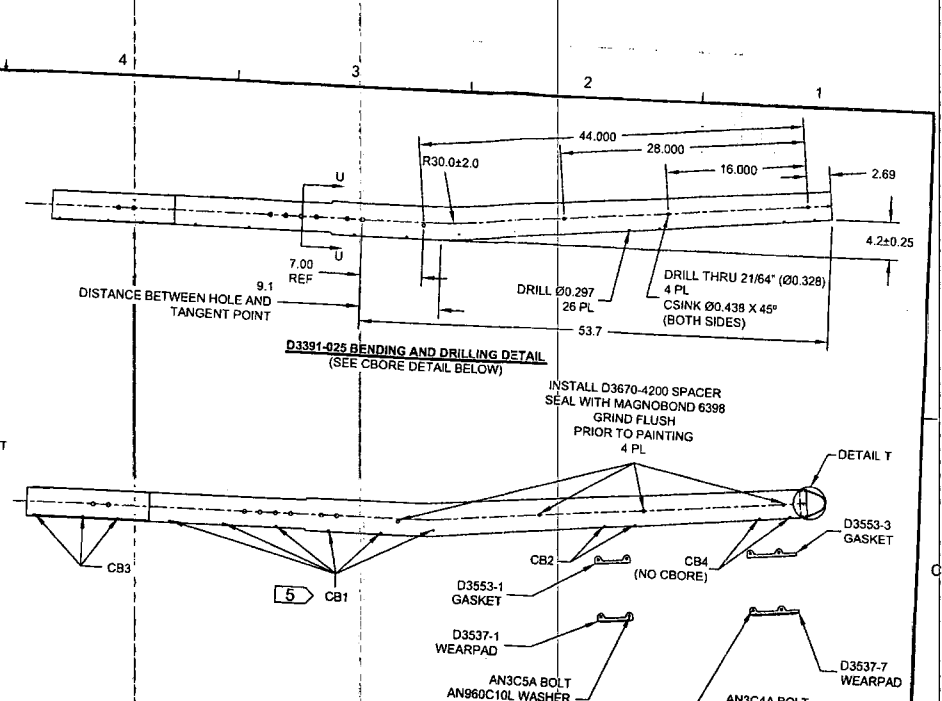
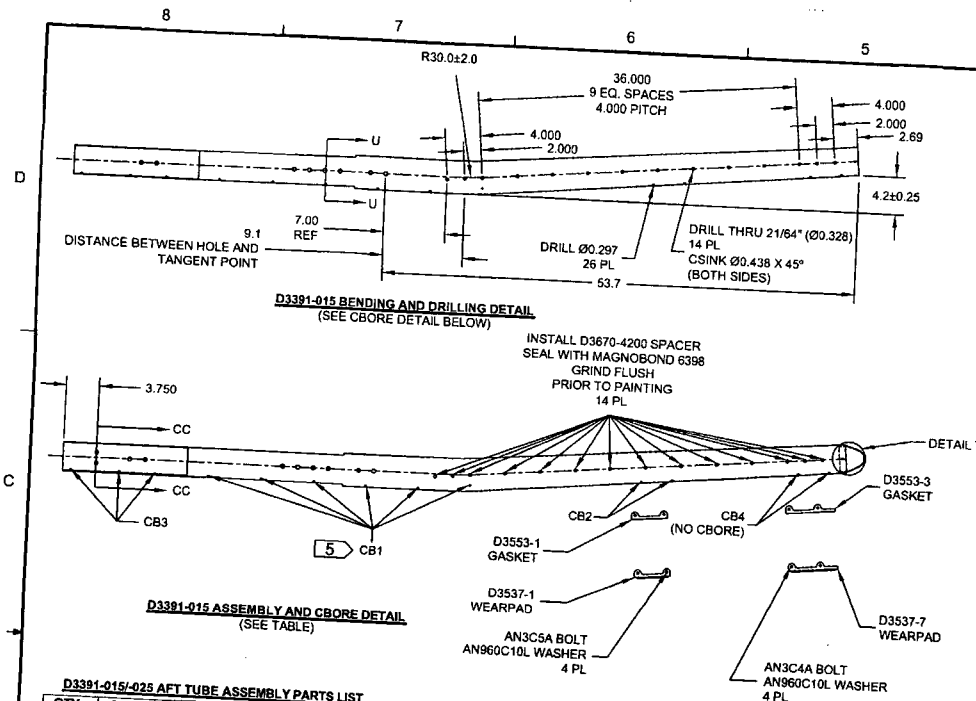
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

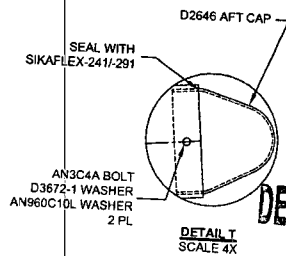
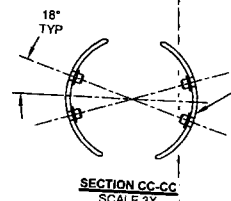
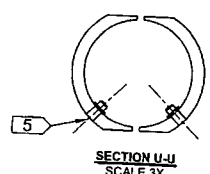
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER



CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

W/O 56716

RELEASED
08-09-05

DART AEROSPACE USA, INC
PORT HADLOCK, WA

DESIGN	PH	DRAWING NO. D3391	REV. H SHEET 8 OF 8
DRAWN	AJS		
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MFG. APPR.	JE		
APPROVED	JE		
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN JP	CHECKED L	MFG. APPR. M	APPROVED MP		DE APPR. MP		
DATE 09.09.23	DATE 04.09.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02

MP

w/o 56716

W/O: 56716		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr.	Approval QC Inspector	
		Scrap "1" wearplate D3564.3/1355489	JH	10/07/15	X1			

Part No: D412-742-041 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries